

Prepared by the Kentucky Environmental Quality Commission in celebration of the EQC 30th- Anniversary - 1972 - 2002. Do you have an event to add to our timeline? If so please <u>contact</u> us with any additions, corrections, or comments.

### **Pre 1700**

• For thousands of years Native Americans lived and hunted within the present boundaries of Kentucky.

# 1750

- Thomas Walker explores Ky. through Cumberland Gap.
- Coal discovered in Kentucky.

## 1774

• First permanent settlement in Ky. at Fort Harrod.

### 1775

• Daniel Boone blazes the Wilderness Trail.

# 1792

- Kentucky becomes the 15th state.
- Kentucky population of 73,677.
- Most of the land in central Kentucky has been converted to agriculture.

# 1793

• Ky.'s first paper mill in Georgetown operated by Craig-Parker Company.

## 1810

• Lumber production begins in Ky.

### 1812

• Reelfoot Lake created by the 1811-1812 New Madrid earthquakes.

• Mammoth Cave first promoted making it the second oldest tourist attraction in the U.S.

# 1818

• First oil well in Ky. first major waterway alterations made to navigable rivers in Ky.

# 1819

• First commercial coal mine in Ky., known as the "McLean drift bank" opened in Muhlenberg.

# 1830

- Peak iron ore production in Ky. 1830 1860.
- 2,000 tons of coal mined in Ky.

# 1833

• Cholera outbreak in Lexington - kills 1,500 in less than 10 days.

# 1834

• First railroad in Ky. completed - Lexington to Frankfort.

## 1843

• 100,000 tons of Ky. coal production.

# 1836

- Ky. River Lock and Dam construction begins.
- 150,000 tons of coal mined in Ky.
- Ky. Geological Survey formed.

# 1852

• 1852 Lexington to Louisville railroad completed.

# 1870

• First strip mine in Ky.

• <u>Cholera epidemic</u> - thousands of people are believed to have died statewide. It wasn't until 1882 that the link between cholera and contaminated water was discovered.

# 1876

• Ky. Commission on Fish and Fisheries established.

# 1884

 Ky. Department of Mines and Minerals established to ensure proper ventilation and safety conditions of mines.

## 1890

- United Mine Workers of America formed.
- Hopkins County leading coal producer in state for 18 straight years.

# 1895

• Ky. population reaches 2 million.

## 1897

• National Forest Management Act passed authorizing commercial use of public forests.

## 1900

• National Geological Survey established.

# 1904

• Child lead poisoning linked to lead-based paints.

## 1906

• Ky. Board of Agriculture, Forestry, and Immigration created.

# 1907

• Ky. <u>lumber production</u> peaks at 917 million board feet.

• U.S. Bureau of Mines founded to promote safety and welfare of miners.

## 1910

• First forest survey of Ky. is completed. Predicts supply will be exhausted at current cutting rates.

### 1911

• First municipal wastewater treatment plant in Winchester, Ky.

### 1912

- First hunting and fishing license issued in Ky.
- Ky. Board of Forestry created.

## 1913

- Ky. mining law replaces original mine law of 1884.
- Pine Mountain Settlement School established.
- Weeks-McLean Act gives Secretary of Agriculture power to regulate waterfowl seasons.

## 1914

- World War I increases demand for Ky. coal to 20.3 million tons.
- Federal regulation of drinking water begins.

## 1915

• National Park Service created

### 1917

• Largest mine explosion in Ky. history kills 62 miners in Clay, Kentucky No. 7 mine, Webster County.

## 1918

• First industrial facility locates in what will become known as Rubbertown in West Jefferson County.

## 1919

• First state forest created (Kentenia).

- Eastern Ky. experiences an oil and gas boom.
- 42.1 million tons of Kentucky coal production.
- Eastern Ky. experiences an oil and gas boom.

## 1923

• First dragline (large area surface mine machines) built.

## 1924

- Ky. State Park System established.
- Pine Mountain State Park Kentucky's first state park created.

### 1926

• Mammoth Cave National Park authorized – fully established in 1941.

## 1929

• Bernheim Forest established in Clermont, Ky.

## 1930

- 300 coal company-owned towns in Kentucky by the 1950s coal mines one-by-one played out and the coal camps were abandoned.
- Harlan County Mine Wars begins.
- Worst drought in Ky. history.

## 1931

• First <u>state wildlife management area</u> purchased in Caldwell County. Became the 1,604 acre Jones-Keeney Wildlife Management Area.

### 1933

- National Soil Erosion Service is formed.
- Tennessee Valley Authority created.

## 1934

• Record number of <u>farms</u> recorded in Ky. - 278,298 farms.

- Federal Flood Control Act ultimately results in dams along major rivers in Ky.
- Ky. Division of Forestry recognized through the Reorganization Act of 1936.

## 1937

- Massive <u>flooding</u> throughout the Ohio River Valley causes \$250 million in damage. Kills 200 people in Louisville.
- Daniel Boone National Forest created (originally the Cumberland National Forest).

### 1938

• Ky. River dam construction begins - completed in 1944.

### 1940

- World War II increases demand for coal to 72.4 million tons. Most coal mined in Ky. up until now was by underground mining methods.
- <u>Deer population</u> reduced to 2,000 in Ky.
- Blight kills American Chestnut in Ky.'s forests.
- Chlorination of public water supplies begins.
- Ky. Soil and Water Conservation law passed.

### 1948

- ORSANCO created to protect water quality in the Ohio River.
- Water Pollution Control Act passed by Congress.
- 70 wastewater treatment plants in operation in Ky.
- Ky. Agriculture Equipment Revolving Loan Program established to finance equipment for conservation districts to conduct conservation projects that benefited the agriculture community.

# 1950

- Deer restocking program initiated by Ky. wildlife agency.
- Ky. Water Pollution Control Commission created.

## 1951

• Lake Cumberland was created with the completion of Wolf Creek Dam.

- <u>Paducah Gaseous Diffusion Plant</u> begins operations. Will become the most costly contaminated waste site cleanup in Kentucky.
- Jefferson County Air Pollution Control District established.

## 1953

• Ky. Strip Mining and Reclamation Commission is formed.

# 1956

 Federal Water Pollution Control Act Amendments focus on wastewater treatment loans and grants—between 1957 and 1972 Kentucky received \$84.32 million and built 254 projects.

## 1958

- Morris Forman Waste Water Treatment Plant built—largest in Kentucky.
- Green River severely polluted by brines produced during oil production.

# 1959

- 800 wild turkeys left in Ky.
- Petroleum production peaks in Ky. at 27 million barrels.
- Construction of **Barkley Dam** begins.

## 1960

• Ky. population reaches 3 million.

## 1961

• Murphy's Pond purchased by the Nature Conservancy.

- Harry Caudill publishes <u>Night Comes to the Cumberland's</u> raising awareness of the environmental and social conditions in Appalachia.
- Rachel Carson publishes <u>Silent Spring</u> alerting the public to the dangers of pesticides.

- State permits <u>Maxey Flats</u> commercial low-level radioactive waste site in Fleming County in hopes of attracting the nuclear industry. Later becomes a federal superfund site.
- Land Between the Lakes National Recreation Area created.

### 1964

• The <u>Ky. Forest Survey</u> of 1964 was the first intensified inventory of forest resources ranking the state eighth in hardwood timber volume and fourth in the production of hardwood logs.

## 1965

- Muhlenburg County leads nation in coal production.
- Ollie Combs lies down in front of a bulldozer to prevent strip mining near her home. Her arrest caused statewide and national attention to coal mining in Kentucky.
- Federal Water Pollution Control Administration created precursor to the U.S. Environmental Protection Agency.
- Three Division of Forestry firefighters killed while fighting wildfire in Harlan County.

#### 1966

- Ky. passes revised strip-mining bill with enforcement and reclamation practices.
- Federal Freedom of Information Act passed.
- Kentucky Civil Rights Act passed.
- First Kentucky air pollution control law creating the Air Pollution Control Commission in the Department of Health.

# 1967

- State air-quality monitoring network begins.
- Discovery of <u>Valley of the Drums</u> containing some 17,000 leaking and rusting drums of waste near Brooks in Bullitt County, considered one of nation's worst waste sites.

- TVA Paradise coal-fired power plant goes online.
- National Environmental Policy Act passed by Congress.
- Ky. begins regulating <u>landfills</u>.
- Lilly Cornett Woods old-growth forest in Letcher County purchased by the state.
- Federal Coal Mine Health and Safety Act passed also creates Black Lung Benefit.

- First <u>Earth Day</u>. Millions of people participate nationwide <u>Clean Air Act</u> passed by Congress setting standards for conventional air pollutants.
- U.S. Environmental Protection Agency established.
- First Zoo in Ky. opens in Louisville.
- Number of farms drop to 127,000 average size increases to 128 acres.
- Hyden Mine disaster kills 39 miners in Leslie County.
- 72% of monitored <u>waterways</u> impaired by pollution in Ky.

### 1972

- <u>Water Pollution Control Act</u> amendments passed by Congress establishing goal of zero discharges by 1985 and fishable/swimmable waters by mid-1983.
- Pesticide DDT banned by U.S. EPA.
- Ky. Environmental Quality Commission established.
- Ky. becomes the leading coal producing state in the nation.
- Ky. Wild Rivers Program created nine rivers have since been designated wild rivers.
- Ky. severance tax on coal established.
- Major <u>coal synfuel development</u> movement Ky. creates research programs to support demonstration projects – program ends in 1986.
- Federal Endangered Species Act passed 42 species in Ky. <u>listed</u> since its passage.
- Bald eagle listed as federal endangered species.
- Ky. Natural Resources and Environmental Protection Cabinet established.
- Phaseout of leaded gasoline.
- OPEC oil embargo results in national energy crisis leads to increase in Kentucky coal production and prices.

### 1974

- Cave Run Lake becomes operational.
- Federal Safe Drinking Water Act passed.
- Series of <u>tornadoes</u> worst storm disaster in state history killing 77 persons, injuring 1,377 and causing damage estimated at \$110 million.
- Ky. Water Quality ambient monitoring network established—composed of 30 Division of Water stations, 16 ORSANCO stations and 11 U.S. Geological Survey stations.

- Ky. Chapter of Nature Conservancy organized.
- Unleaded gasoline introduced.
- First Ky. Report to Congress on Water Quality assessing water quality conditions in the state.

- Resource Conservation and Recovery Act (RCRA) passed by Congress.
- Ky. Nature Preserves Commission established.
- National Forest Management Act passed by Congress.
- Scotia Mine disaster kills 26 miners in Letcher County.
- Red River dam scrapped after environmental community protests and governor withdraws state support.
- Toxic Substances Control Act passed by Congress.
- Clean Air Act Amendments set standards for sulfur dioxide power plant emissions to control acid rain.
- Amendments to Clean Water Act focus on toxic pollutants funding wastewater treatment plants.
- Safe drinking water standards take effect.
- Surface Mining Control and Reclamation Act passed by Congress.
- Ky. assumes drinking water primacy to implement federal Drinking Water Act of 1974.
- Maxey Flats Low-Level Radioactive Waste Site closed after contamination detected in groundwater.
- LWD begins operation Ky.'s only commercial hazardous waste incinerator.

### 1978

- U.S. EPA bans ozone-destroying fluorocarbon gases in most aerosol products.
- <u>Love Canal</u> toxic waste dumpsite in Ny. calls national attention when president declares it a national emergency which leads to passage of the federal Superfund law.

### 1979

- Blackacre in Jefferson County becomes Ky.'s first state nature preserve.
- Partial meltdown of 3-Mile Island nuclear reactor in Pennsylvania raises public concern regarding nuclear energy.
- Emergency state hazardous waste regulations adopted.
- U.S. EPA bans PCB manufacture.

- Superfund legislation passed by Congress.
- Ky. Superfund program established.
- Ky. water quality standards approved under the Federal Water Pollution Control Act of 1972.

- Failure of surface mining impoundment along Agnes Creek in Harlan County kills one. Causes millions of dollars in cleanup cost and litigation.
- Valley of Drums listed as Ky.'s first federal superfund site.
- Record year for <u>forest fires</u> in Ky. 367,000 acres of woodlands burn.
- Ky. <u>Hazardous Waste Management Fund</u> created to clean up waste sites.
- Oil shale development receives attention in Ky.– state law and regulations passed.
- Osprey released at Land Between the Lakes and other Ky. sites Osprey's later considered on the road to recovery with 20 active nests in 1996.

### 1982

- Bacterial outbreak of hepatitis-A kills one and sickens 100 in Buttermilk Springs in Meade County. Tests
  revealed water wells were contaminated with bacteria.
- Ky. hazardous waste permitting program established.
- Ky. assumes conditional primacy to carry out federal <u>surface mine law</u>.
- Ky. receives first federal funds from the Abandoned Mine Land program.
- Ky. Health Department assumes on-site sewage permit program.
- 5 contaminated sites in Ky. added to federal Superfund list.
- Ky. Agricultural District Act passed to protect farmland.
- Ky. issues first mountaintop mining permit 395 permits issued since.
- VET testing initiated in Jefferson County to control tailpipe emissions.
- Toxic release at a Union Carbide plant in Bhopal, India kills 3,800 people leads to national Community Right To Know Act.
- U.S. Army selects incineration as preferred alternative for the destruction of weapons stored at six sites in U. S. including Bluegrass Army Depot in Richmond.

- First <u>state fish consumption advisories</u> issued for Town Branch/Mud River in Logan/Butler/Muhlenburg counties and West Fork Drakes Creek in Simpson/Warren counties after PCBs discovered in fish tissue.
- Lawsuit against asbestos manufacturers filed by Ky. attorney general attempts to recover costs associated with asbestos removal in state buildings.
- Ky. permit program to control chloride water discharges from oil wells established after brine pollution impairs water quality of several waterways.
- Discovery of ozone hole over Antarctica.
- Ashland Oil in Cattletsburg settles out of court on 700 lawsuits by Kenova, W.Va. residents, alleging property damage from caustic fallout.
- Ky. receives primacy to carry out the federal hazardous waste program.

- Maxey Flats radioactive waste site added to federal Superfund list estimated cost to contain the site is \$33.5 million.
- <u>Underground storage tank</u> regulations take effect in Ky.
- Superfund Amendments and Reauthorization Act passed which includes Title III Emergency Planning and Community Right to Know Act and the <u>Toxic Release Inventory</u> to track releases of some 650 toxic chemicals.
- World's worst nuclear power accident occurs at <u>Chernobyl</u> in the former USSR (now Ukraine) killing 30 people immediately and causing 2,500 deaths.
- Safe Drinking Water Acts Amendments passed by Congress.
- Dioxin contamination at Times Beach, Missouri the U.S. Environmental Protection Agency evacuates residents and buys the whole town.
- Ky. River Authority created to address the problem of aging locks and dams and water supply issues along the Kentucky River.

### 1987

- 2-acre coal mine exemption repealed by OSM due to mining abuses. Approximately 700, 2-acre sites in Ky. resulted in bond forfeitures.
- First Lands Unsuitable for Mining petition approved in Ky. designating 2,900 acres in the Cannon Creek Reservoir in Bell County.
- Union Carbide Corporation to pay \$470 million in claims arising from the **Bhopal** tragedy.
- Settlement of surface mining lawsuit filed the National Wildlife Federation and the Ky. Resources Council results in \$13.5 million to fund enforcement activities in Kentucky.
- U.S. EPA radon gas random survey in Ky. reveals 17% of homes have unsafe levels.

## 1988

- Broad Form Deed outlawed in Kentucky giving corporate mineral rights precedence over individual owner's surface rights.
- Ky. Wastewater Revolving Loan Fund created.
- Ky. facilities report toxic releases 139 million pounds reported released to the environment.
- Wyoming displaces Ky. as the leading coal producing state.
- Governor creates Commission on Family Farms to focus on rural economy.

- Ky. Environmental Education Council created not funded until 1995 with portion of environmental fines.
- Ohio River fish consumption advisory issued due to unsafe levels of PCBs and chlordane found in fish tissue.
- 50% of monitored waterways impaired by pollution.
- 5,453 complaints received regarding proposal to build <u>Russell County sewage treatment plant pipeline</u> to Lake Cumberland.
- Exxon Valdez spill leads to one billion dollars in civil damages and criminal restitution the largest single amount ever paid as a result of environmental violations.
- <u>Vinyl chloride in 13 wells</u> in Dayhoit, Harlan County the site is subsequently declared a federal superfund site.

- Ky. Heritage Land Conservation Act passed.
- Fee on new <u>tires</u> imposed to help clean up tire dumps and address the disposal of some 6.5 million waste tires generated each year in Ky.
- 5 contaminated sites Ky. in added to federal superfund list.
- Tobacco remains number one cash crop in Ky.
- Duck populations drop by 50% from 1959 levels due to loss of wetlands.
- Record state coal production at 179.4 million tons.
- Citizens fight proposed incinerators in Lawrence and Simpson counties.
- Gov. issues moratorium on solid and medical waste incinerators.
- Department of Defense ordered to destroy chemical weapon stockpile by 2007 incineration chosen as preferred alternative for all storage sites including Bluegrass Army Depot in Richmond.
- Forest Stewardship Act created by Congress as part of the 1990 Farm Bill to fund forest conservation practices.

### 1991

- Exotic zebra mussels found in Ky.
- Land Between the Lakes designated a United Nations Biosphere Reserve.
- Robinson Forest declared Unsuitable for Mining 10,500 in Breathitt and Knott counties.
- Water well drillers certification program established in Ky.
- Ky. passes law during a special session closing substandard landfills and setting new more stringent requirements on solid waste landfills after state is targeted for disposal of out-of-state garbage.
- Bald eagles make comeback in Ky. Seven bald eagles produced from four nests.
- River otter restoration program initiated in Ky.
- No net loss wetland nationwide policy adopted an estimated 80% of Ky.'s wetlands have been drained or converted to other uses between the 1950s and 1970s.

- 45 of state's 76 solid waste landfills close under new solid waste rules passed in 1991.
- Ky. gains primacy to carry out federal solid waste permitting program.
- <u>Paducah Gaseous Diffusion Plant</u> listed as a superfund site becomes the most costly cleanup of a Ky. site estimated at \$1 to \$4 billion.
- Blanton Forest old-growth forest discovered in Harlan County.
- Bottle bill sponsored in Ky. fails in committee.
- EQC publishes first "State of Kentucky's Environment" trends report.
- United Nations holds earth summit on sustainable development.
- 101 acres a day converted to urban areas and roads in Ky.

- 50% of 840 drinking water systems in Ky. have violations of drinking water rules.
- <u>Secondhand smoke</u> designated as human carcinogen. Ky. ranks highest in nation in percentage of adults that smoke.
- Waterborne disease outbreak in Milwaukee kills 100 and hospitalizes 4,000 from <u>Cryptosporidium</u> parasite in public drinking water in Eastern Ky.
- Radioactive contamination of Martha oil fields receives state attention.
- A 19-mile section of Red River declared a National Wild and Scenic River located in Daniel Boone National Forest.

# 1994

- Ky. Agriculture Water Quality Act passed.
- Ky. Rare Plant Recognition Act passed.
- Ky. ranks 2nd in nation in release of ozone depleting chemicals.
- Gov. creates the Ky. Biodiversity Task Force following year the <u>Ky. Biodiversity Council</u> is created to promote efforts to conserve natural resources.
- Natural Resources Conservation Service created by Congress.
- Ky. Soil and Water Quality Cost Share Fund established to fund farmland practices to conserve soil and protect water resources.
- PACE program created to protect Kentucky farmlands and purchase easements.

## 1995

- 18,408 domestic drinking water waterwells drilled in Ky. during past decade.
- Bald eagle down-listed from federally endangered to threatened.
- Power plants reduce statewide SO<sub>2</sub> emissions by 41% from 1980 levels.
- Zebra mussels found in Ky. River.
- Ky. Groundwater Ambient Monitoring Network established.

- Federal Safe Drinking Water Act Amendments passed.
- 42.6 million pounds of toxic chemicals reported released to Ky.'s environment.
- Ky. hazardous waste program granted final federal authorization for waste cleanup program to implement the corrective action (RCRA cleanup) program.
- Bald eagle nests produce 17 fledglings in Ky.

- Elk reintroduced to Ky. at the Cyprus Amax Wildlife Management Area.
- State <u>Confined Animal Feeding Operation</u> regulations filed after 3 mega-hog operations proposed regulations expire in 2000 after legislature vetoed them.
- 33% of monitored waterways impaired by pollution.
- 7% of 730 drinking water systems in Ky. have violations of safe drinking water rules.
- PRIDE initiative introduced to cleanup eastern Ky.
- Massive flooding in 101 Ky. counties.
- Incineration of nerve gas weapons at <u>Bluegrass Army Depot</u> put on hold until disposal alternatives are fully explored.
- Ky. Watershed Management Framework signed by 20 cooperating agencies.
- Ky. Drinking Water Revolving Loan Fund established to finance projects financed with federal grants.
- Coal companies file lawsuit to seek compensation regarding state permit denial to mine Lily Cornet Woods –
  one of Ky.'s few remaining tracts of old growth forest.

### 1998

- Ky. Forest Conservation Act passed requiring best management plans to protect water quality.
- Onsite sewage law passed in Ky. specifying approved onsite sewage plan before hookup of electricity.
- Mountaintop mining rules challenged.

### 1999

- 22,000 onsite sewage permits issued double that of 5 years ago.
- 234 miles of waterways declared unsafe for <u>swimming</u> due to high bacteria levels—all urban waterways declared unsafe.
- 55% of homes in Ky. connected to public sewers.
- Broiler production increases in Ky. from 22 million in 1992 to 188 million in 1999.
- Timber production reaches record levels in Ky. at 1.1 billion board feet.

- Martin County Coal slurry spill results in the largest coal slurry impoundment failure in southeastern U.S. history.
- Ky. population reaches 4 million.
- <u>Black Mountain Lands Unsuitable for Mining Petition</u> dismissed after state agrees to purchase timber and mineral rights.
- \$2.8 billion needed to repair upgrade drinking water infrastructure in Ky. over next 20 years.
- Number of farms drop to 91,000 farms average size 151 acres.
- Wild Turkey fire and bourbon spill into Ky. River sets record fish kill in state.
- Fish consumption advisory issued for all Ky. waterways after mercury discovered in fish tissue.
- Energy crisis hits Ky. natural gas prices spike over 40 percent.
- Emergency state CAFO regulations re-issued challenged by Ky. Farm Bureau -expire in 2001after legislative veto.
- Ky. Forest Conservation Act takes effect requires practices to control water pollution and training of loggers.

- Outbreak of <u>southern pine beetle</u> destroys thousands of acres of pine trees in Ky. and leads the U.S. Forest Service to relocate last known endangered red cockaded woodpeckers out of state.
- Gov. issues power plant moratorium after 24 applications received.
- Mandatory garbage collection and bottle bill fails in the 2001 Ky. legislative session.
- Blanton Forest opens to the public.
- Bio-terrorism threatens nation and Ky. after Sept. 11 terrorist attack. Numerous anthrax emergency calls made but biological agent not found in Kentucky.
- Area surrounding Pine Mountain Settlement School declared Unsuitable for Mining.
- Big Sandy River named as one of the nations most endangered rivers by American Rivers.
- Gov. Smart Growth Task Force issues findings.
- Ky. Voluntary Environmental Remediation Act passed to encourage cleanup and redevelopment of brownfields.

#### 2002\*

- Merchant power plant siting bill debated by General Assembly.
- Franklin County Circuit court upholds <a href="#">CAFO regulations</a> striking down legislative veto process.
- Solid Waste advanced disposal fee and tipping fee to raise \$30 million to clean up old landfills and address waste issues approved by House but fails to win support in Senate. A Compromise is reached increasing landfill tipping fees to clean up old landfills.
- State CAFO regulations expire after legislature passes bill to veto.

\*as of May 1, 2002.